



To attain a bird's-eye view, T.S. Roberts devised a tree stand for his boxy camera.



Through the Lens of Pioneers

More than a century ago, some conservation-minded Minnesotans lugged cameras afield to capture wildlife on film.

By Tim Brady

Wildlife photography as a pastime and art form was in its infancy in the late 1890s when Dr. Thomas Sadler Roberts, future author of *The Birds of Minnesota*, adopted the camera as his favored means of studying bird life. Though his expertise with the camera was still emerging, Roberts was asked to provide advice on the relatively new art of photography to readers of *Bird Lore*, forerunner of *Audubon* magazine.

Roberts' article included a description of a trip "drifting idly in a little boat through one of the many channels



PHOTOGRAPHS COURTESY BELL MUSEUM OF NATURAL HISTORY

Dr. Thomas Sadler Roberts

Roberts' willingness to scale trees—or cut trees to scale—resulted in some

of the Mississippi River.” He was initially interested in the numerous prothonotary warblers “flashing hither and thither across the channel.” But when he came upon a family of chickadees, nesting in “the crumbling trunk of a long since departed willow tree,” Roberts decided to give up on the warblers and set up camp to capture this scene of avian domesticity.

Big Obstacles

Kodak's introduction of film and hand-held cameras in the late 1880s made photography a hobby available to hundreds of thousands of amateur “Kodakers.” (See *Photographic Developments*, page 26.) Yet photographers

of wildlife had major obstacles between themselves and a good shot of chickadees in Mississippi sloughs. The good field cameras of the day were big, boxy things that worked best on solid tripods. They were usually wooden-framed and had lenses made heavy by brass and aluminum encasements.

To accommodate this cumbersome gear, Roberts offered some simple yet sound advice to novices reading his article: Instead of focusing on the bird itself, “focus on the spot to which the bird is expected to return.” In the case of the chickadee family, that home was the crumbling willow tree, which Roberts said presented another problem: “A little investigation showed the



of the first close-up photos of bird nests, both occupied and unattended.

nest to be too high for setting up the camera satisfactorily, as the tripod legs sank deep in the mud and water.” To tilt the camera lens up at the nest would have been impossible “as the sun was nearly overhead” and would have ruined the shot. “But our kit included a saw for just such an emergency,” Roberts wrote, “and, sawing off the soft stub [of the tree trunk] at the proper height, it was lowered gently until the [nesting] hole came just on a level with the camera, placed horizontally and at a distance of about three feet.” In other words, Roberts lowered the chickadee apartment from a penthouse view to somewhere above garden level so the camera could peek inside.

Roberts proceeded to take shots of the chickadee family all afternoon, as the birds grew accustomed to the new view from their front door.

Typical of the Day

Roberts in many ways typified the day’s wildlife photographer. He was a dedicated amateur with an interest in the craft intensified by his passion for birds and natural history. As a practicing physician, he had the means to pursue this often costly pastime. Roberts retired from medicine and became the director of the Museum of Natural History, now the Bell Museum, in 1917.



George Shiras III

George Shiras, above, invented the technique of flashlight photography. He mounted his camera and lights in the bow of his boat to capture photographs of wildlife at night.

A man of similar means and passion was George Shiras III. Probably the most innovative of the early wildlife photographers, he invented such techniques as running a shutter string to a blind and setting the string across a trail so that animals would trip it and snap their own photos.

Shiras also invented “flashlight” photographs—a technique in which he typically set up his camera in a boat and used a beam of light to freeze animals feeding along shore in the evening. He used a second flash of light—a powdered charge ignited by a trigger—to temporarily stun the animal and illuminate the image. He shot some remarkable pictures of animals at night, the first ever made.

Shiras, like Roberts, came from the Victorian professional class. He practiced law for many years in Pittsburgh and served a single term in the U.S. Congress. By 1906, when his photos began appearing in *National Geographic Magazine*, Shiras was established as one of the preeminent nature and wildlife photographers of the day. One of Shiras’ major subjects was the wildlife of the Lake Superior region, where his family kept a cabin throughout his life.

Friend and Guide

Shiras was also a good friend of Carlos Avery, one of the early commissioners of Minnesota’s Department of Fish and Game,



Left: Writing about this flashlight shot, Shiras said the moose "paid no attention to the explosion and glare, perhaps considering them as thunder and lightning, for he immediately thrust his head deep under water for another mouthful." Bottom: These deer tripped a cord Shiras set to trigger a flashlight and camera.





A raccoon takes the bait that Shiras had wired to a flashlight and camera.

GEORGE SHIRAS III, NATIONAL GEOGRAPHIC IMAGE COLLECTION

Photographic Developments

Before 1878 photographers used wet-plate negatives, which had to be developed immediately in the field. That meant anyone traveling outdoors to capture images of nature with a camera needed to haul a dark room as well—an obviously limiting arrangement.

Dry plates, which came into

use around 1878, allowed photographers the luxury of taking their negatives from the woods back to the studio, essentially opening the door to nature photography. Dry plates also required far less exposure time than did wet plates: from a matter of minutes, down to a single second.

COURTESY GEORGE EASTMAN HOUSE

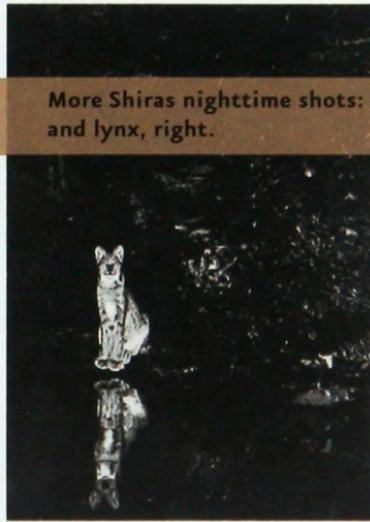


Wet Plate: Brady Studio sliding box camera

Camera technology improved in the 1890s with the development of telephoto lenses, but more important to the widespread



More Shiras nighttime shots: beaver, left, and lynx, right.



and himself a photographer of wildlife. Avery's efforts dot the pages of the early *Fins, Feathers and Fur* magazine, a forerunner to *Minnesota Conservation Volunteer*.

In 1909 Avery guided Shiras on a trip through the newly created Superior National Forest, where, among other images, Shiras captured a nighttime shot of a white-tailed deer up to its chest in

water and feeding on aquatic plants.

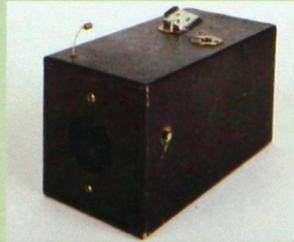
Both Shiras and Avery were active members of the American Game Protective Association, which advocated measures to protect diminishing and endangered wildlife. Shiras used his renown as a photographer to trumpet conservation legislation, as well as to encourage hunters to pick up the camera instead of a gun.

COURTESY GEORGE EASTMAN HOUSE



Anthony's Patent Novelette View camera

COURTESY GEORGE EASTMAN HOUSE



Kodak (barrel shutter) hand-held, roll film

COURTESY LAURA ERICKSON



Digiscope: Digital camera mounted to scope with Zeiss Diascope Digital Adaptor

use of cameras was the hand-held camera developed by Kodak. The easy-to-use Kodak weighed about a pound and a half.

Today, digital cameras provide a new frontier in wildlife photography. Compact and versatile, digitals have even given rise to a new appli-

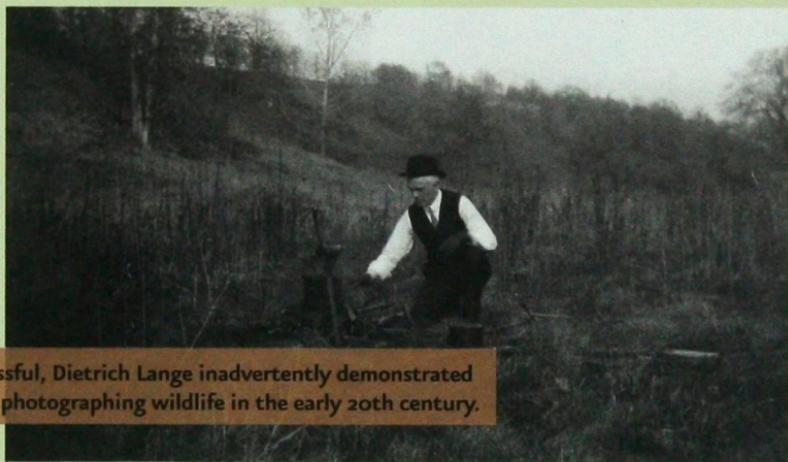
cation called *digiscoping*, in which photographers can hold cameras up to the eyepiece of a wildlife spotting scope and snap away.

Conservation Photography.

Educating the public on the habits, needs, and splendors of wild animals turned out to be one of the great functions of wildlife photography. Roberts used slides of photographs as backdrops to lectures he gave on bird life. The museum used his photos as guides for painting backdrops

in some of its dioramas, three-dimensional scenes of some of Minnesota's remaining native habitats, such as waterfowl haven Heron Lake. A large collection of Roberts' photographs remains in the museum archives.

Though the march of technology has made high-quality photography a more



Largely unsuccessful, Dietrich Lange inadvertently demonstrated the difficulty of photographing wildlife in the early 20th century.

PHOTOGRAPHS COURTESY MINNESOTA HISTORICAL SOCIETY

Elusive Shots

Dietrich Lange could be classified as a would-be photographer of wildlife. The German-born Lange came to Minnesota as a teenager, attended the Mankato Normal School, and in 1914 became superintendent of St. Paul public schools. He had a deep and abiding interest in nature. Lange expressed this passion by authoring a number of popular boys' books that described Indian life, pioneer days, and the natural history of Minnesota.

In the summer of 1912, Lange took a budding interest in wildlife photography to Itasca State Park, where he planned to photograph beaver. His diary for the last week of July and the first two weeks of August gives a sense of the frustrations involved in the pursuit.

On July 25 Lange wrote: "I'm at last trying to photograph beaver and feel mighty good about it." He found "the most favorably located beaver house I have ever seen." It

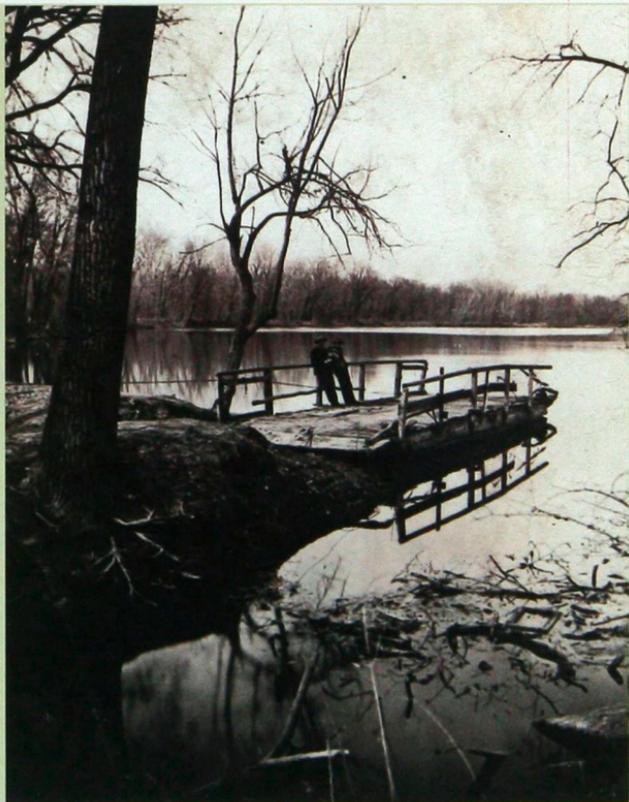
"has the sun nearly all day." Two beavers made their appearance, as he watched and prepared his camera. Unfortunately, by the time he was set up, no shot was available. Lange headed back to camp without a photo.

Back the next day, he once again "got no pictures," and the same thing happened July 27. On July 30 he wrote: "When I was setting up my camera at 5:45, a beaver appeared out of focus range. I think he was in

widespread phenomenon in the modern era, the basics of good wildlife photography remain as outlined by Roberts: "The successful bird photographer must possess a good camera including a first-class lens, with at least an elementary knowledge of how to get the best results from it; some acquaintance

with field and forest and their feathered inhabitants; and a fund of patience, perseverance, and determination to conquer that is absolutely inexhaustible." ●

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Lange had better luck photographing people than animals. This crisp shot shows two men waiting for a ferry to cross the Minnesota River below Fort Snelling.

the house and heard me and came out from curiosity. He did not seem alarmed, but dived quietly again. Now it is 6:45 and I haven't seen anymore. This is the most tantalizing business. But I'll get there yet."

Just an hour later, Lange was

able to get his first exposure on a beaver and was "much encouraged." Because he made no reference to the photo's quality elsewhere in the diary, the sense is that the snap was unsuccessful.

He headed back to the beaver home on Aug. 5, 6, and 7, but he

did not record any successful exposures. A final trip to the pond Aug. 15 ended with Lange sounding as if he had a train to catch: "About 7:00 I made one exposure of $\frac{1}{5}$ second on beaver in water. Made several others soon after. Left park at 7:30."